

OREGON TREE HEALTH THREATS



July 2024

Square miles known to be infested with EAB: 10.4

This monthly newsletter gives updates and resources on emerging threats to the health of Oregon's trees in natural and managed landscapes. It is published by the Oregon Department of Forestry with the collaboration of other state, regional, federal, Tribal, and local agencies and organizations. To subscribe, email jim.gersbach@odf.oregon.gov

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Japanese cedar longhorned beetle reaches Oregon

The Oregon Dept. of Agriculture confirms that at least 30 Japanese cedar longhorned beetles (*Callidiellum rufipenne*) have been found in at least 13 different trapping sites in Portland. This marks the first time the invasive insect has been seen in Oregon. The beetle was detected in Vancouver, B.C. as long ago as 1927 and in Washington State in 1954 but isn't thought to have established populations then.

Native to China, Korea, Japan and far eastern Russia, in its homeland the insect is considered a minor pest of trees in the cypress (Cupressaceae) family.



Females emerge in the spring and lay eggs on trees that are already dying or dead. The resulting larvae then feed for a year on tissues below the bark of the tree before emerging in April or May to start a new cycle. However, the U.S. Dept. of Agriculture reports that the beetle has attacked even healthy ornamental trees in New England, where it may have been introduced on wood pallets or other packing material.

The beetle has been recorded on the following host trees in its native range in east Asia:

- Japanese cedar (*Cryptomeria japonica*)
- Hinoki cypress (*Chamaecyparis obtusa*)
- Sawara cypress (*Chamaecyparis pisifera*)
- False arborvitae (*Thuja dolabrata*)
- True firs (*Abies*)
- Pines (*Pinus*)

Outside its native range, the insect has also been found infesting these trees:

- American arborvitae (*Thuja occidentalis*)
- Eastern redcedar (*Juniperus virginiana*)
- Juniper (*Juniperus communis*)
- Monterey cypress (*Cupressus macrocarpa*)

For more information, including the insect's size and appearance, please go to <https://www.invasive.org/publications/aphis/pajclb.pdf>

Potential repellent against MOB is being tested in Oregon



Piperitone, a component of essential oils derived from plants, is being tested in Oregon as a potential repellent to keep Mediterranean oak borers from infesting trees. ODF Forest Entomologist Christine Buhl said testing began in June to see if using piperitone could be an additional strategy for MOB control. Results are expected this fall.

Buhl said, "Traps within areas known to be infested with MOB are baited with both repellent and attractant to determine if the repellent outcompetes beetle attraction to the lure." (see photo).

Summit on invasive insect pests to be held Aug. 5-7 in Washington County

Anyone interested in state efforts to protect commercial resources, urban tree canopies, culturally significant species, and natural areas from invasive insect pests is invited to attend a free summit on that topic Monday-Wednesday, Aug. 5-7 in Hillsboro. "Safeguarding Oregon: Understanding Invasive Insect Pests" is being put on by the Oregon Invasive Species Council and hosted at Clean Water Services headquarters.

Each day, pest management staff from involved agencies will cover the successes and challenges of tackling insect threats facing the state. Participants will learn in presentations and in field visits about the risks of taking no action, as well as what management resources and strategies are needed to protect Oregon's people and economy from insect pests.

The summit is especially geared to regional, state and local government decision-makers, resource managers, landowners and others potentially affected by invasive insect pests.

"Eradication is ideal but not always possible," said Chris Benemann, Business Operations Manager for the Oregon Dept. of Agriculture. "So we'll also highlight at the summit how slowing



pest spread can be a critical step in the protection of agriculture, natural resources, and urban landscapes.”

Participants will leave with knowledge about current and future threats as well as an understanding of what can be done to improve Oregon’s capacity for dealing with the economic and ecological risks posed by invasive insects. Participants can choose to attend all three days or register for individual events. Due to space limitations, pre-registration is requested. For more information or to register go to [OISC Summer Summit — Oregon Invasive Species Council](#)

Day One

Focus will be on the state’s Japanese beetle response. Includes a half-day information session followed by a visit to a local beetle treatment site in Washington County.

Day Two

Presenters will give an overview of Oregon’s main insect pest threats and management strategies. Six species of special interest to the greater Portland metropolitan area and the Willamette Valley will be highlighted:

- Spongy moth (formerly gypsy moth)
- Japanese beetle
- Emerald ash borer (EAB)
- Mediterranean oak borer
- Spotted lanternfly
- Japanese cedar longhorned beetle

Day Three

We’ll begin with a field tour to visit ground zero of the EAB response in Forest Grove and wrap up in the afternoon with the Oregon Invasive Species Council’s quarterly business meeting.

Hardwood Management course July 31 in Rickreall will cover EAB/MOB

The Pacific Northwest chapter of the Forest Stewards Guild is holding a training in Rickreall on July 31st from 9 a.m. to 5 p.m. on management of hardwoods in Western Oregon. In addition to other topics, attendees will receive the latest information from ODF’s Lilah Gonen about the risk to hardwoods in the western part of Oregon from EAB and MOB, and what landowners can do. The afternoon will include a tour by Sarah and Ben Deumling of Zena Forest Products and their mill. Included will be discussions of how to manage ash and Oregon white oak stands, and how to plan for EAB and MOB. For more information and to register, please go to

<https://foreststewardsguild.org/event/pacific-northwest-guild-gathering/>

New EAB support specialists at ODF start mid-July

With Evan Elderbrock and Lilah Gonen moving into permanent positions with ODF’s Urban and Community Forestry program, two people new to ODF have now been hired to serve as replacement EAB Support



Photo: *Matt Mills*

Specialists assisting communities with preparation, mitigation, and recovery. Matt Mills comes to ODF from the Oregon Dept. of Agriculture where he has been coordinating that agency’s EAB response in Washington County, including overseeing the state’s slow-the-spread work in and around Forest Grove.

Kat Bethea joins ODF from the City of Portland Urban Forestry. There, as a Botanic Specialist they worked on inventorying street trees. Bethea holds Bachelor’s degree in Biology and in Forensic Science from University of Central Oklahoma. They then spent several field seasons as a field technician on projects ranging from specimen collection for museums to invasive insect surveys in Oregon.



Photo: Kat Bethea

“We had a very competitive selection process with great candidates. We are pleased to have found two candidates so well qualified and highly motivated to do this important work,” said Scott Altenhoff, ODF Urban and Community Forestry Program Manager. Start date for both Mills and Bethea is mid-July. They will work with Lilah Gonen, who is now serving as overall EAB Coordinator for ODF.

ODA trains PGE utility workers on signs and symptoms of EAB infestation

Few groups of workers are as well placed to spot signs of EAB infestation in ash trees than utility workers. They spend large parts of their work week trimming trees for clearance around powerlines, bringing them in close contact with the upper branches of trees, where the first signs of EAB infestation usually appear. To help them identify trees that might be infested, the Oregon Dept. of Agriculture on July 9 in Forest Grove trained 35 Portland General Electric staff and contractors in what to look out for.



Photo at left: Matt Mills from ODA points out to PGE utility workers and contractors the thinning canopy of an ash tree caused by EAB. About three dozen workers attended the on-site training to learn how to identify EAB symptoms of EAB infestation in ash trees.



Traps lie in wait for emerging EAB adults

The federal Animal Plant Health Inspection Service (APHIS) has made EAB detection traps available through ODF at more than 200 public and private sites in western Oregon. The traps are designed to capture EAB adults, which emerged in Oregon this year in June. EAB traps should be checked at least every eight weeks after placement and the lure replaced at those times. If an EAB adult does turn up in a trap, please report it to the [Oregon Invasive Species Council hotline](#).

About half the larvae population is expected to have emerged by mid-July. Some larvae continue emerging over the summer. Depending on temperatures, a few stragglers may emerge as late as October. Adults feeding on ash tree leaves do only minor damage. However, after mating females can fly to new ash trees and lay their eggs. When those eggs hatch, the larvae begin feeding on the inner bark of trees, causing dieback of foliage in the canopy. Death of the whole tree usually follows within just a few years.

West Multnomah SWCD comes up with solution to prevent bat entrapment

When staff from the West Multnomah Soil and Water Conservation District (WMSWCD) found a small bat had gotten caught in one of their EAB traps last year, they were concerned. Northwest bats play important ecological roles, helping keep insect numbers in check. When WMSWCD learned that bats had also accidentally been captured in other funnel-traps, they decided to improvise a solution to protect bats from becoming trapped.

According to WMSWCD Senior Conservationist Kammy Kern-Korot, staff created mesh coverings using pieces of Vexar tree-protection tubing. They then secured these with zip ties over the lowest funnel of each trap.

“The depository of anti-freeze and insects, which we think attracted the bats, is below this lowest funnel. The plastic mesh openings are large enough for target insects to enter, but not bats,” said Kern-Korot. “Metal woven wire could also be used as a substitute for the plastic mesh.”

At right: *Plastic mesh coverings are helping keep bats from becoming trapped in EAB traps. Photo courtesy of Kammy Kern-Korot.*



Four sites in the state have been chosen for testing native Oregon ash

Geneticist Richard Sniezko, PhD, of Dorena Genetic Resource Center in Cottage Grove says four sites in Oregon have been picked where Oregon ash (*Fraxinus latifolia*) will be planted. The young trees will

be studied to see if any are resistant to EAB, and also to learn basic information about hardiness, growth rates and other traits.

The sites are:

- The J.E. Schroeder Seed Orchard in St. Paul, Ore.
- Lebanon, Ore. in Linn County
- Sherwood in Washington County
- Gaston in Washington County

“Because it’s not a commonly grown commercial species, before now Oregon ash hasn’t been closely studied,” says Sniezko. “These test plantings will allow us to learn a lot more about the species, which we hope will help us in eventual efforts to recover populations of Oregon ash after EAB impacts.”

Read more about the project at [OR ash progeny test proposal-draft 8 30 23.pdf \(oregonstate.edu\)](#)

Federal funding plays pivotal role in Oregon’s efforts to slow EAB spread

Federal funding from the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) has been critical to state agencies’ early efforts to slow the spread of EAB. Provisions in those acts dedicated to combating invasive species and aiding urban forestry have helped Oregon State University and the departments of Agriculture and Forestry in Oregon focus on planning, public education and engagement, and building effective networks. The money has also helped support on-the-ground tree work, including monitoring and detection, removal of infested trees and replanting, and treatment of some at-risk trees.

Oregon’s approach to EAB draws heavily on lessons learned from other states, said Scott Altenhoff, Manager of ODF’s Urban and Community Forestry Program. “A coalition of local, state, regional and federal partners in Oregon is taking a community-centered approach that leverages education, strategic planning, and interagency collaboration to slow the spread of EAB and help communities be better prepared to cope with the threat.”



While it’s clear that Oregon will never be able to eradicate EAB, the coalition’s aim is to slow its spread so that communities have more time to prepare and respond. So far, early efforts and investments are really paying off. EAB has only been detected in two cities in NW Oregon, Forest Grove and Cornelius. Moving forward, the key to EAB containment will be to maximize public awareness about the risks of transporting infested firewood while focusing on “early detection and rapid response.”

In Forest Grove, ODF provided BIL funding for the removal this spring and replacement next winter of infested ash trees in both natural and residential areas.

Above: *Alison Herrell with ODF demonstrates how to properly treat a mature ash tree with a systemic injection of emamectin benzoate at Centro Cultural de Washington County. Photo: Evan Elderbrock*

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In Cornelius, ODF conducted a communitywide ash tree inventory and identified large, healthy trees suitable for systemic treatment with emamectin benzoate. City staff then used this information to secure a local grant to treat these significant trees. ODF has also helped lead a workforce development program for Latinx high school students that focuses on ash tree identification, inventory, and EAB response planning. This broadens students' career horizons, emphasizing the diverse opportunities available in urban forestry.

Publications

NEW! - *Modelling impacts to water quality in salmonid-bearing waterways following the introduction of emerald ash borer in the Pacific Northwest, USA.* Maze, D., Bond, J. & Mattsson, M. *Biol Invasions* (2024). <https://doi.org/10.1007/s10530-024-03340-3>

Alternatives to Ash in Western Oregon: With a Critical Tree Under Threat, These Options Can Help Fill Habitat Niche. G. Kral, and D.C. Shaw. 2023. OSU Extension EM 9396. <https://catalog.extension.oregonstate.edu/em9396>

Oregon Ash: Insects, Pathogens and Tree Health by Oregon State University Extension (also available in Spanish at this same website)
<https://extension.oregonstate.edu/pub/em-9380>

Wood Decay Fungi Associated with Galleries of the Emerald Ash Borer by the University of Minnesota and Uruguay's *Instituto Nacional de Investigación Agropecuaria*
[Forests | Free Full-Text | Wood Decay Fungi Associated with Galleries of the Emerald Ash Borer \(mdpi.com\)](https://www.mdpi.com/forests)

Useful links for more information

Mediterranean oak borer fact sheet
<https://www.oregon.gov/odf/Documents/forestbenefits/fact-sheet-mediterranean-oak-borer.pdf>

EAB monitoring guidance
<https://www.oregon.gov/odf/forestbenefits/Documents/eab-monitoring-guidance.pdf>

Oregon Dept. of Agriculture
<https://www.oda.direct/EAB>

Oregon Dept. of Forestry
<https://www.oregon.gov/odf/forestbenefits/pages/foresthealth.aspx>

OSU Extension
<https://extension.oregonstate.edu/collection/emerald-ash-borer-resources>

Emerald Ash Borer Information Network, a collaborative effort by the USDA Forest Service and Michigan State University
www.emeraldashborer.info

USFS Forest Health Protection
<https://www.fs.usda.gov/foresthealth/index.shtml>